



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: JT9D-7R4D, -7R4D1      BYPASS RATIO: 5.0  
 UNIQUE ID NUMBER: 1PW026      PRESSURE RATIO ( $\pi_{00}$ ): 23.4  
 COMBUSTOR:  
 ENGINE TYPE: TF      RATED THRUST ( $F_{00}$ ) (kN): 213.5

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	2.4	16.2	64.7	5.0
AS % OF ORIGINAL LIMIT	12.5	13.7	74.5	26.0
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			93.2	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			114.6	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			130.3	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			158.5	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
 x DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.055	0.15	0.51	38.50	4.6
CLIMB OUT	85	2.2	1.678	0.12	0.48	30.00	
APPROACH	30	4.0	0.659	0.13	1.36	9.80	
IDLE	7	26.0	0.205	1.25	8.84	4.10	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			810	464	3231	13067	-
NUMBER OF ENGINES				6	6	5	4
NUMBER OF TESTS				7	7	6	5
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				2.2	15.3	61.9	4.6
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	
TEMPERATURE (K)	276-304
ABS HUMIDITY (kg/kg)	

### FUEL

SPEC	Jet A
H/C	
AROM (%)	

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: P&WA  
 TEST LOCATION: East Hartford, CT  
 TEST DATES: 06/03/1980-03/11/1981

### REMARKS

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)